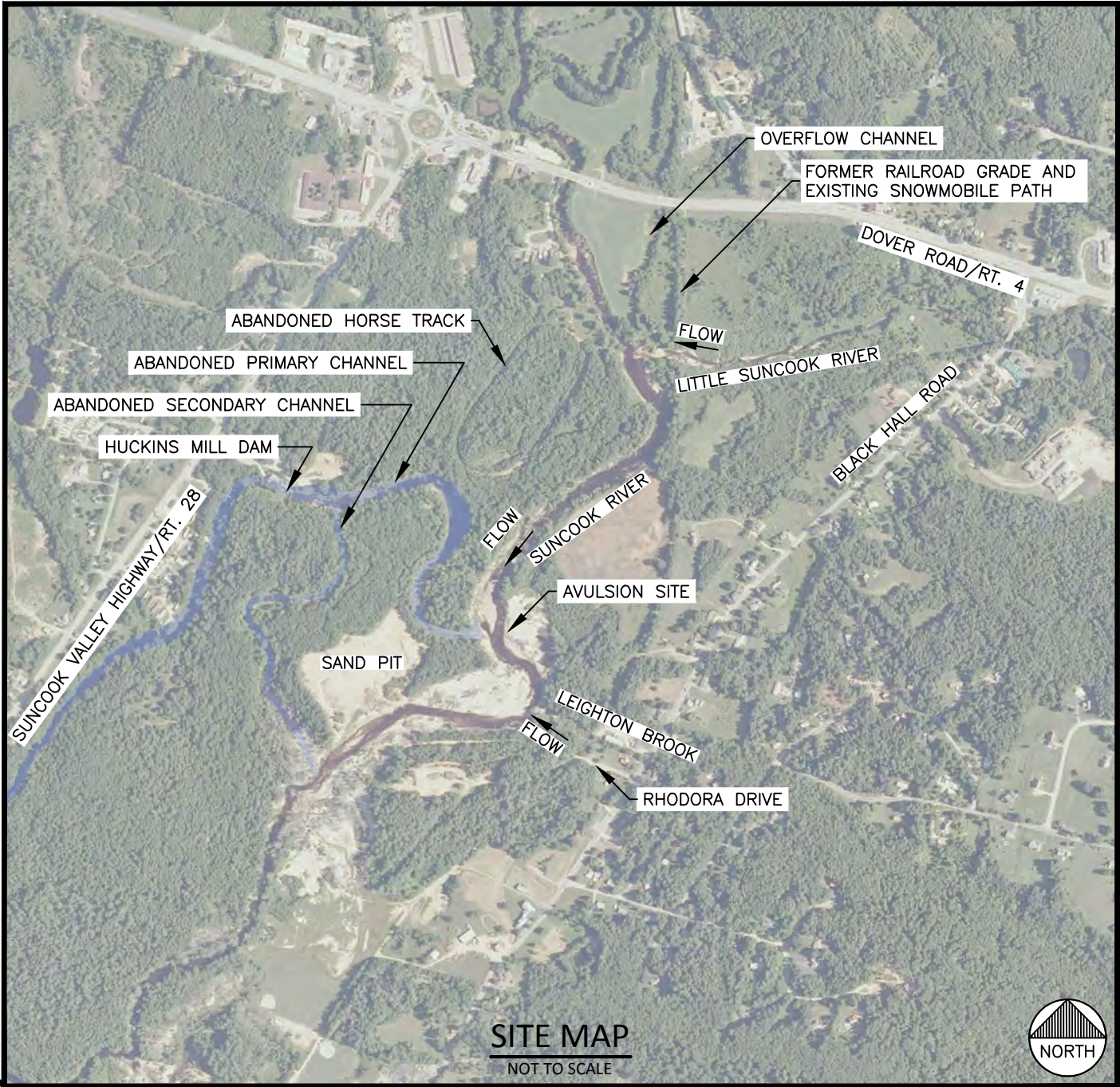


SUNCOOK RIVER MITIGATION

NH DEPARTMENT OF ENVIRONMENTAL SERVICES & NH GEOLOGICAL SURVEY
30% COMPLETE SUBMITTAL, December 8, 2011



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PRELIMINARY NOT
FOR CONSTRUCTION

TITLE SHEET JWG PLOTTED December 8, 2011

STM	BN	BN
DRAWN	DESIGNED	CHECKED
BN	12-08-2011	
APPROVED	DATE	PROJECT

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TITLE SHEET

2 GENERAL NOTES AND EROSION CONTROL DETAILS.dwg PLOTTED December 6, 2011

GENERAL NOTES:

THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

CONSTRUCTION MATERIAL VOLUMES ARE APPROXIMATE. LOCATION AND ALIGNMENT OF SHEETPILE ARE SHOWN AS BEING APPROXIMATE AND MAY BE CHANGED IF APPROVED. ANY EXCESS MATERIAL SHALL BE STOCKPILED NEATLY IN AN APPROVED LOCATION.

AT COMPLETION OF WORK, THE MATERIAL SHALL BE REMOVED FROM THE SITE. NO CONCRETE SHALL BE ALLOWED TO MIX WITH RIVER FLOWS, UNLESS IT IS FULLY CURED.

CONSTRUCTION STAKING:

CONTRACTOR SHALL STAKE PROJECT LINES AND GRADES. CONSTRUCTION STAKING SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

SOME MINOR ADJUSTMENTS TO THE LINES AND GRADES ARE TO BE EXPECTED. THE CONTRACTOR SHALL REPLACE DAMAGED OR DESTROYED CONSTRUCTION STAKES AT NO COST TO THE OWNER. HORIZONTAL AND VERTICAL CONTROL POINTS ARE SHOWN AND SHALL BE USED FOR THIS PROJECT.

EROSION PREVENTION AND SEDIMENT CONTROL PLAN (EPSCP):

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING EROSION PREVENTION AND SEDIMENT CONTROL MEASURES TO COMPLY WITH APPLICABLE REGULATIONS. THE CONTRACTOR SHALL PREPARE AND SUBMIT AN EROSION PREVENTION AND SEDIMENT CONTROL PLAN (EPSCP) IN ACCORDANCE WITH ALL APPLICABLE SEDIMENT CONTROL REGULATIONS.

CONSTRUCTION ACCESS/TRAFFIC CONTROL:

ALL DISTURBED AREAS INCLUDING ROADS AND ACCESS ROUTES SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AT NO COST TO OWNER. ALL DISTURBED AREAS OUTSIDE THE LIMITS OF DISTURBANCE SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AT NO COST TO OWNER.

TEMPORARY CONDITIONS:

THE STRUCTURES ARE DESIGNED TO FUNCTION AS UNITS UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES AT NO COST TO GOVERNMENT.

EXISTING CONDITIONS:

ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

EXISTING DATA:

TOPOGRAPHIC INFORMATION IS PROVIDED FROM PROJECT AREA SURVEY PERFORMED BY INTER-FLUVE, INC. SEPTEMBER, 2011 AND LIDAR FROM STATE OF NEW HAMPSHIRE.

SOILS:

POOATUCK VERY FINE SANDY LOAM, SACO MUCKY SILT LOAM, AND OTHERS PER USDA SOILS SURVEY.

UTILITIES:

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HAVING UTILITIES LOCATED PRIOR TO CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE AFFECTED UTILITY SERVICE TO REPORT ANY DAMAGED OR DESTROYED UTILITIES. THE CONTRACTOR SHALL PROVIDE EQUIPMENT OR LABOR TO AID THE AFFECTED UTILITY SERVICE IN REPAIRING DAMAGED OR DESTROYED UTILITIES AT NO COST TO THE OWNER.

CONSTRUCTION ACCESS:

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ANY REQUIRED TRAFFIC CONTROL INCLUDING, BUT NOT LIMITED TO, SIGNAGE AND FLAGGERS.

ALL SAPLING AND TREES TO BE TRANSPLANTED OR REMOVED SHALL BE APPROVED BY THE ENGINEER AND CLEARLY MARKED.

THE CONTRACTOR SHALL KEEP THE WORK AREAS IN A NEAT AND SIGHTLY CONDITION FREE OF DEBRIS AND LITTER FOR THE DURATION OF THE PROJECT.

TREE SALVAGE:

TREES THAT ARE REMOVED DURING CONSTRUCTION AND EXISTING DOWNED TREES WILL BE USED AS PART OF THE PROJECT. TREES SHALL BE REMOVED WITH ROOT WADS ATTACHED UNLESS THEIR SIZE PROHIBITS THEIR SAFE REMOVAL WITH ROOT WAD ATTACHED. IN THESE CASES THE TREES SHALL BE FELLED AND THE ROOT WADS SALVAGED. TREE TOPS WILL BE UTILIZED AND BE CUT TO FIELD DIRECTED LENGTHS DEPENDENT ON TREE SIZE AND SPECIES.

EXCESS SOIL SHALL BE REMOVED FROM THE ROOT WADS BY SHAKING THE TREE AND BOLE SO THE ROOT WAD COMPLEXITY IS NOT DAMAGED. TREES SHALL BE STOCKPILED AS DIRECTED BY THE OWNER'S REPRESENTATIVE UNTIL THEY ARE USED DURING THE PROJECT.

LIVE TREES:

ALL EQUIPMENT, MATERIALS AND PERSONNEL SHALL REMAIN WITHIN THE LIMITS OF DISTURBANCE.

ALL TREES NOT MARKED FOR REMOVAL SHALL BE LEFT STANDING UNDISTURBED. WORK SHALL NOT DEBARK OR DAMAGE LIVE TREES.

WOOD PLACEMENTS:

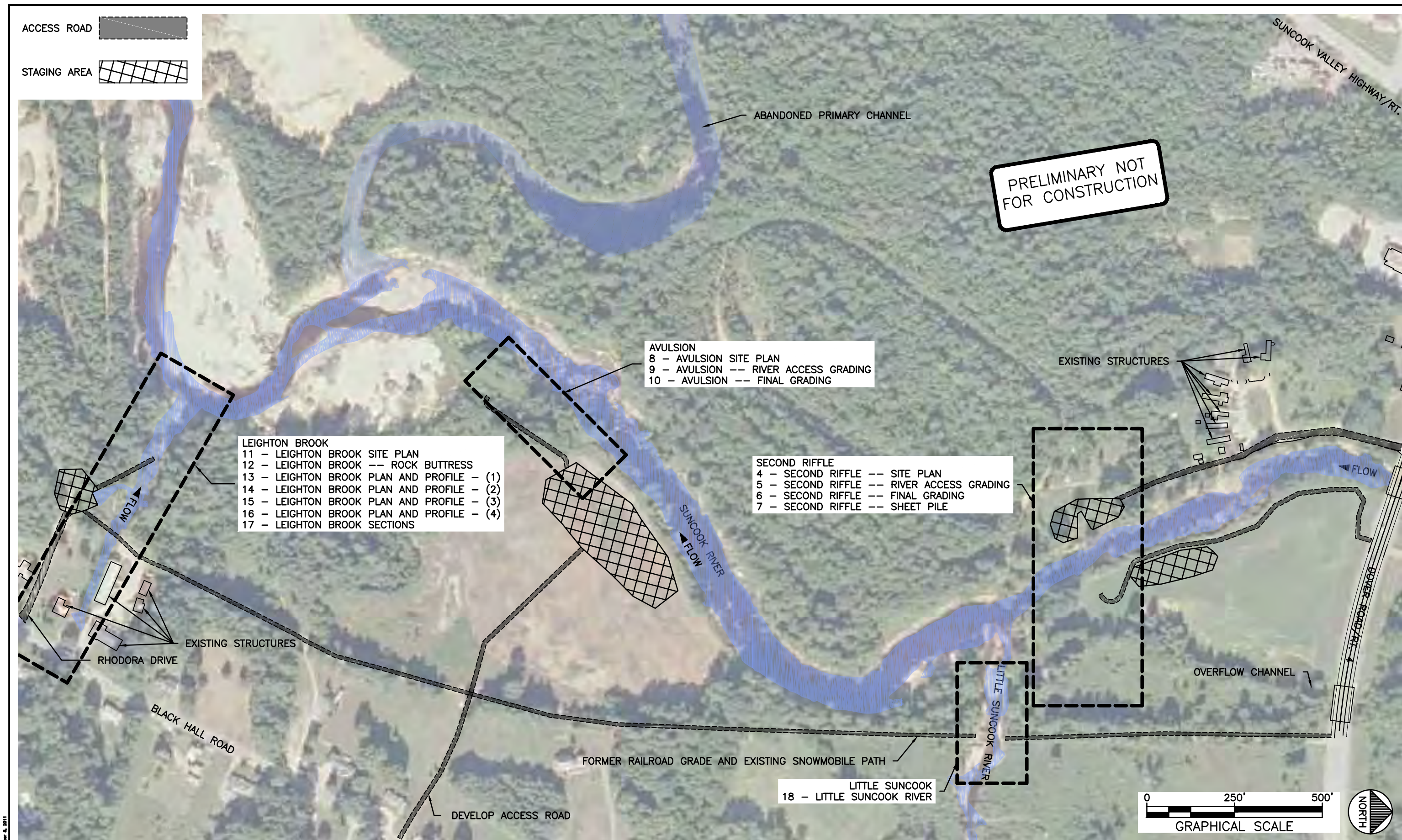
SIZE, LOCATION AND ORIENTATION OF LARGE WOOD PLACEMENTS SHOWN ARE APPROXIMATE. FINAL LOCATION AND ORIENTATION WILL DEPEND UPON THE SIZE AND SHAPE OF THE MATERIAL DELIVERED OR SALVAGED. FINAL PLACEMENT OF LARGE WOOD AND ANCHOR SHALL BE FIT AND APPROVED BY THE ENGINEER.

CONSTRUCTION MATERIALS:

SPECIFIC LOCATION, ALIGNMENT, AND ELEVATIONS OF LOGS AND BOULDERS ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS, MATERIAL SIZE AND BALLASTING REQUIREMENTS AS DETERMINED BY THE ENGINEER.

ANY REMOVED VEGETATION GREATER THAN 6 INCHES DIAMETER AND 15 FEET LONG SHOULD BE INCORPORATED AS HABITAT INTO LOG JAM STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR REMOVING SMALLER CLEARING AND GRUBBING DEBRIS FROM THE SITE AT THE END OF THE PROJECT UNLESS DIRECTED BY THE ENGINEER.

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3 SITE PLAN/Map PLUTED December 8, 2011

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BN	12-08-2011	
APPROVED	DATE	PROJECT

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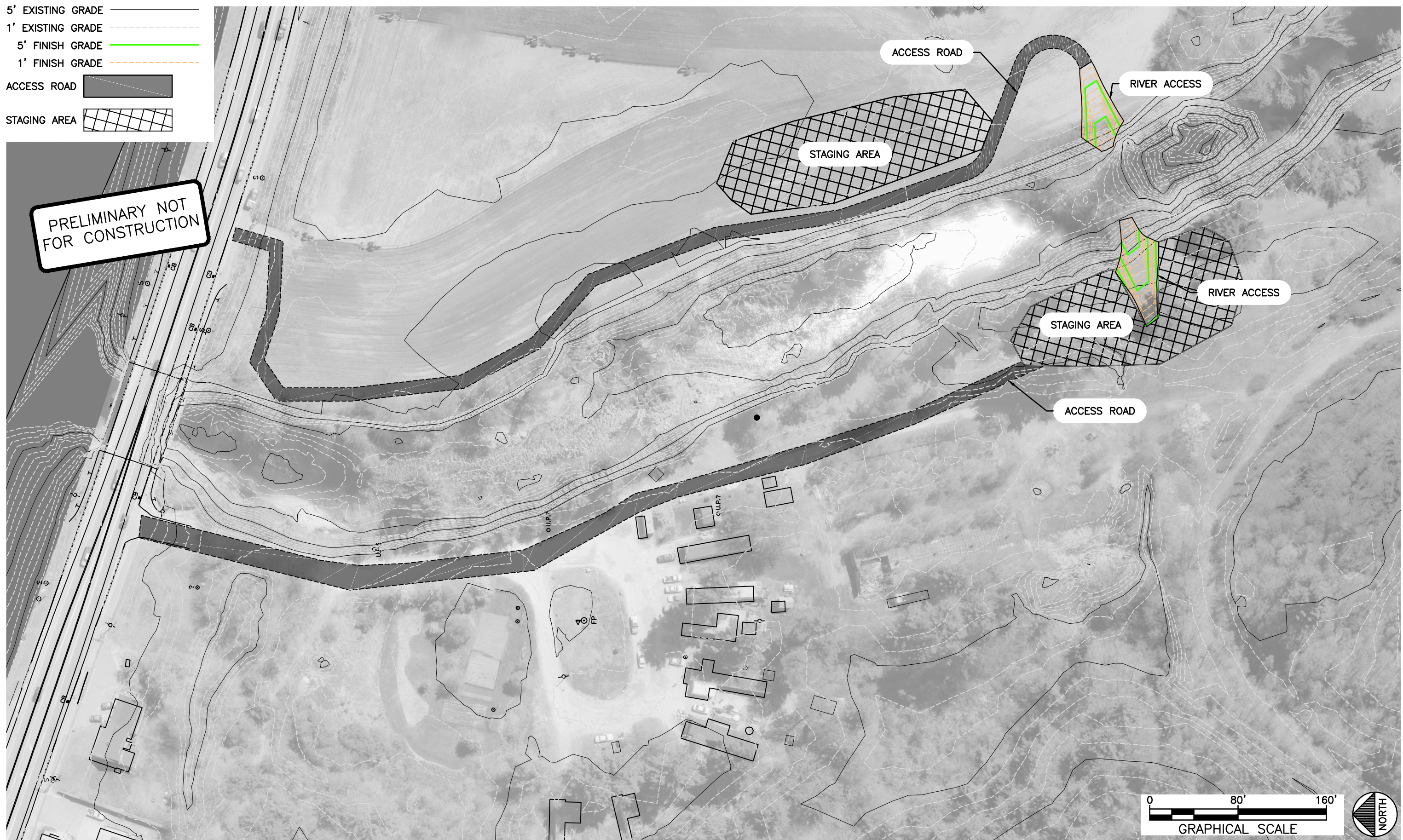


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SITE PLAN

- 5' EXISTING GRADE
- 1' EXISTING GRADE
- 5' FINISH GRADE
- 1' FINISH GRADE
- ACCESS ROAD
- STAGING AREA

PRELIMINARY NOT FOR CONSTRUCTION



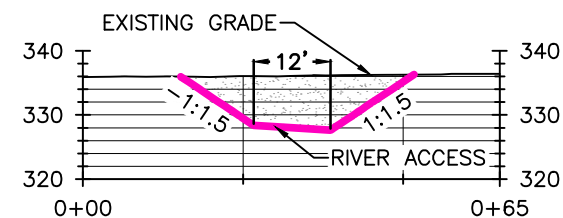
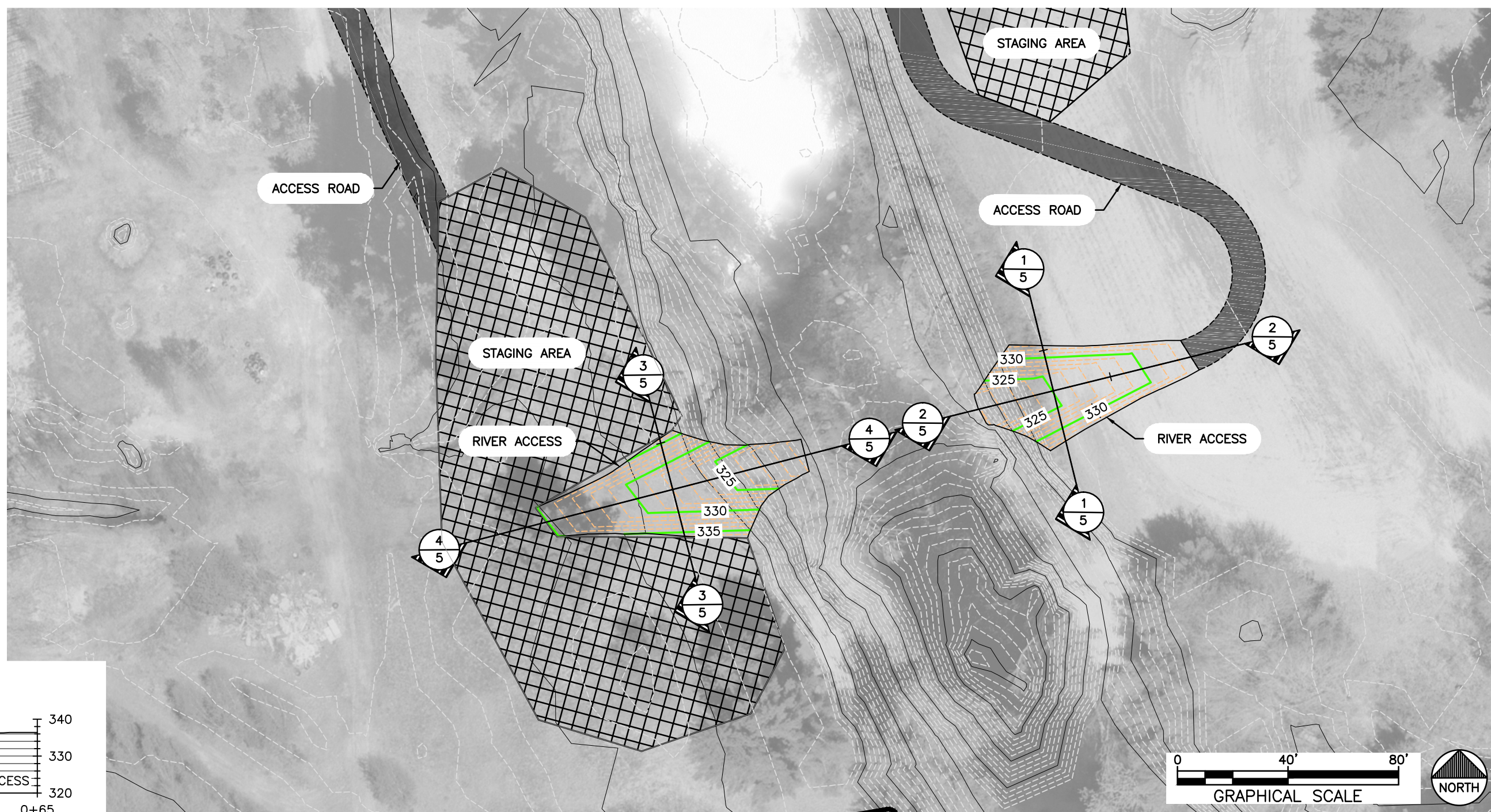
STM	BN	BN
DRAWN	DESIGNED	CHECKED
BN	12-08-2011	
APPROVED	DATE	PROJECT

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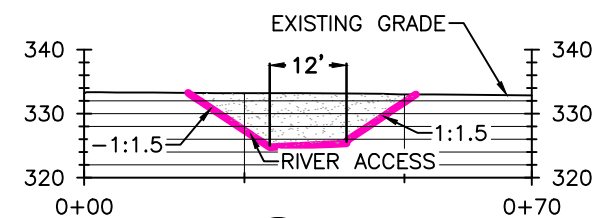
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SECOND RIFFLE -- SITE PLAN

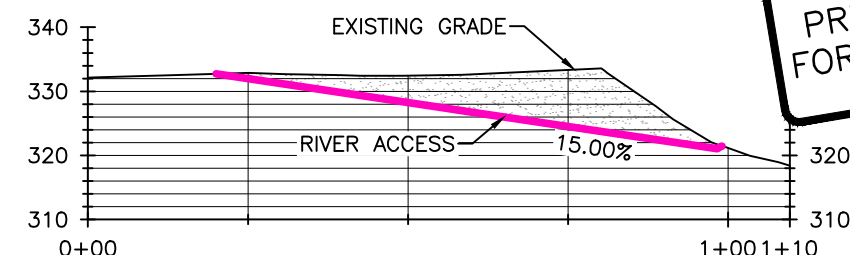
- 5' EXISTING GRADE
- 1' EXISTING GRADE
- 5' FINISH GRADE
- 1' FINISH GRADE
- ACCESS ROAD
- STAGING AREA



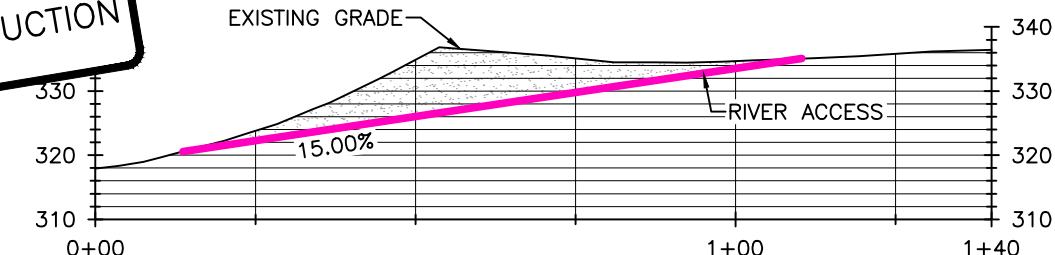
SECTION 3/5 WEST ACCESS ROAD SECTION
1" = 30'



SECTION 1/5 EAST ACCESS ROAD SECTION
1" = 30'



SECTION 2/5 EAST ACCESS ROAD
1" = 30'



SECTION 4/5 WEST ACCESS ROAD
1" = 30'



PRELIMINARY NOT FOR CONSTRUCTION

5 SECOND RIFFLE SURROUNDING PLATTED December 6, 2011

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BN	12-08-2011	
APPROVED	DATE	PROJECT








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SUNCOOK RIVER MITIGATION

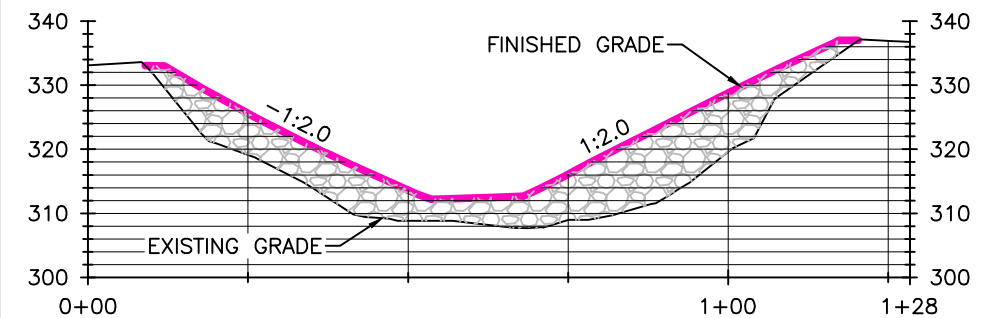
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SECOND RIFFLE -- RIVER
ACCESS GRADING

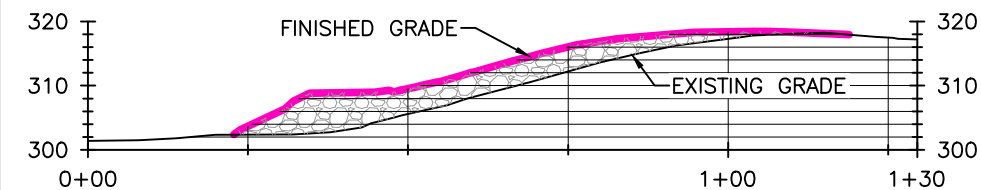
SHEET
5
OF 19

PRELIMINARY NOT
FOR CONSTRUCTION

- SHEET PILE 
- 5' EXISTING GRADE 
- 1' EXISTING GRADE 
- 5' FINISH GRADE 
- 1' FINISH GRADE 
- ACCESS ROAD 
- STAGING AREA 



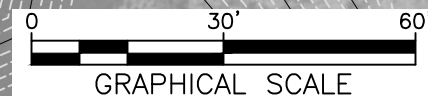
SECTION 1
1" = 30' SECOND RIFFLE MITIGATION SECTION



SECTION 2
1" = 30' SECOND RIFFLE MITIGATION PROFILE

NOTE:

BOULDER VOIDS SHALL BE FILLED WITH NATIVE CASTINGS FROM EXCAVATION. THE FINAL TWO FEET OF FILL PLACED IN THE RIVER ACCESS AREA SHALL BE NATIVE MATERIAL.



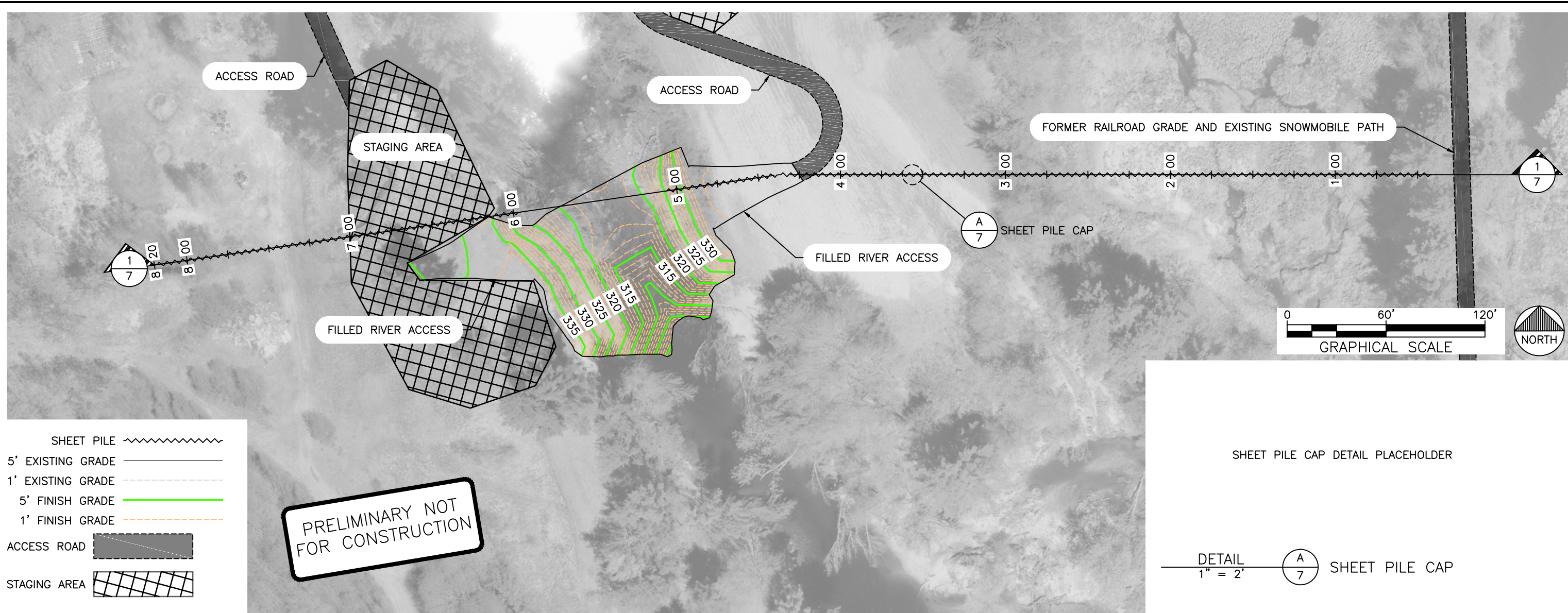
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BN	12-08-2011	
APPROVED	DATE	PROJECT

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SECOND RIFFLE -- FINAL
GRADING

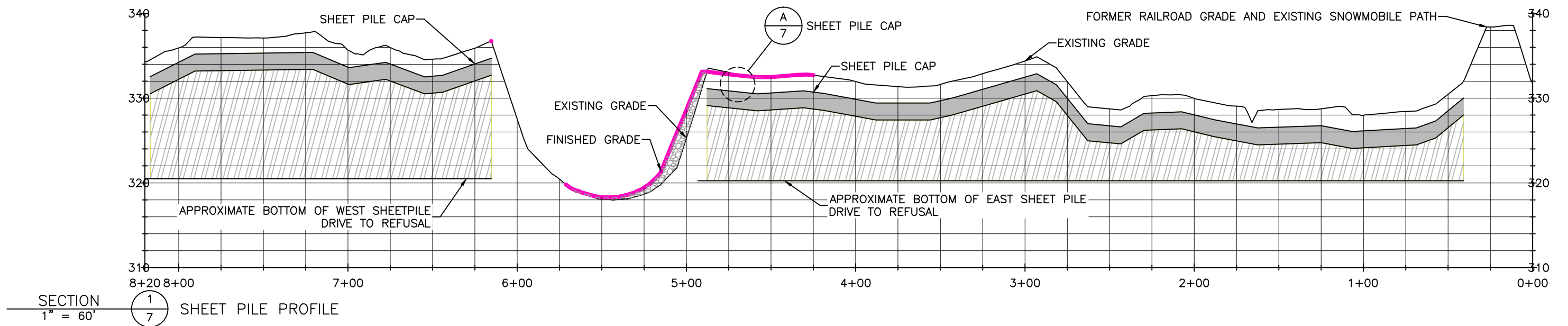
SHEET
6
OF 19



- SHEET PILE
- 5' EXISTING GRADE
- 1' EXISTING GRADE
- 5' FINISH GRADE
- 1' FINISH GRADE
- ACCESS ROAD
- STAGING AREA

SHEET PILE CAP DETAIL PLACEHOLDER

DETAIL SHEET PILE CAP
1" = 2'



7 SECOND RIFFLE SHEET PILE-Long PLOTTED December 6, 2011

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DRAWN	DESIGNED	CHECKED
BN	12-08-2011	
APPROVED	DATE	PROJECT

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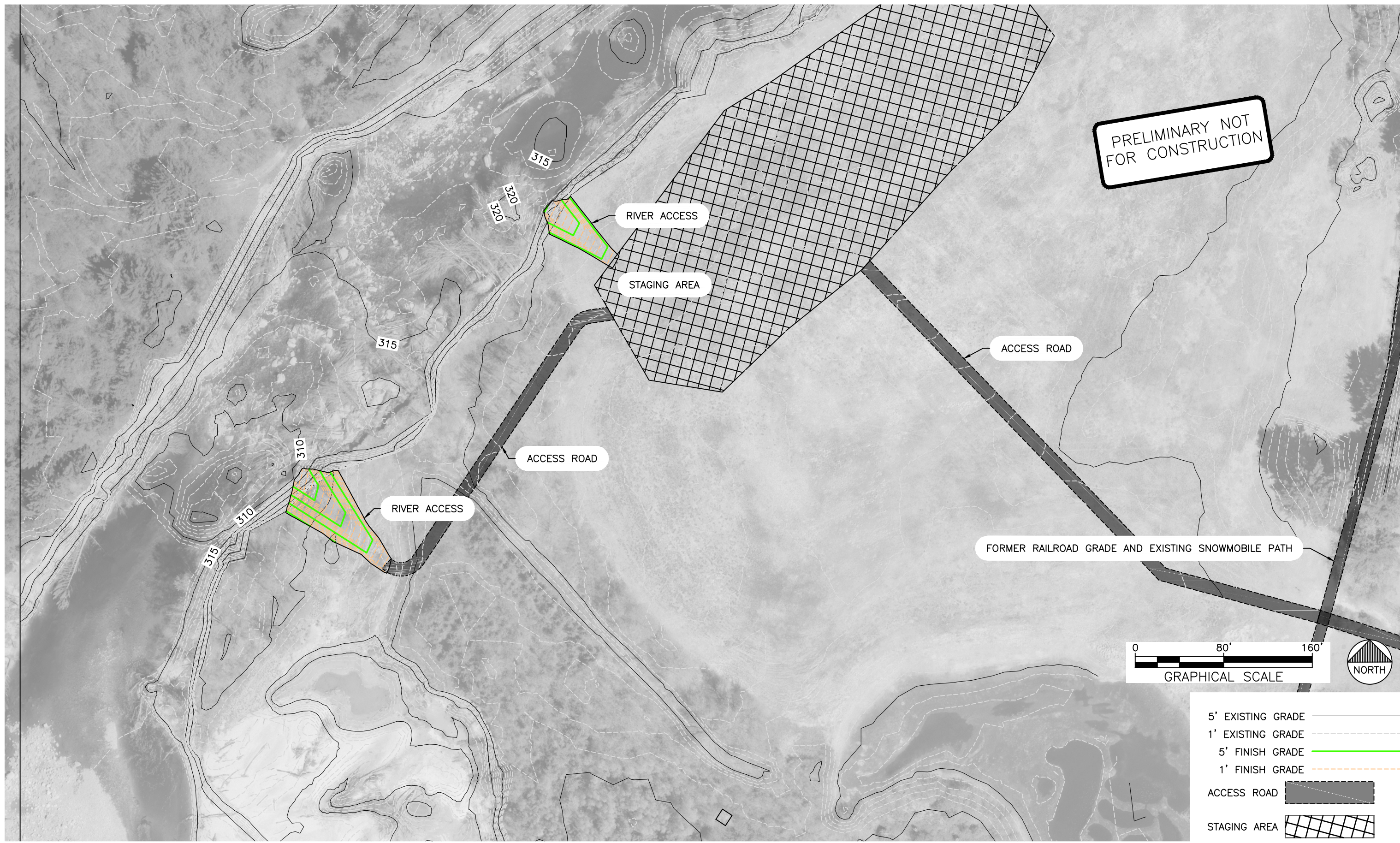


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SECOND RIFFLE -- SHEET
PILE

SHEET
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8-9 AVULSION SUBROUTINE.dwg PLOTTED December 6, 2011



- 5' EXISTING GRADE —————
- 1' EXISTING GRADE - - - - -
- 5' FINISH GRADE —————
- 1' FINISH GRADE - - - - -
- ACCESS ROAD —————
- STAGING AREA [Cross-hatched pattern]

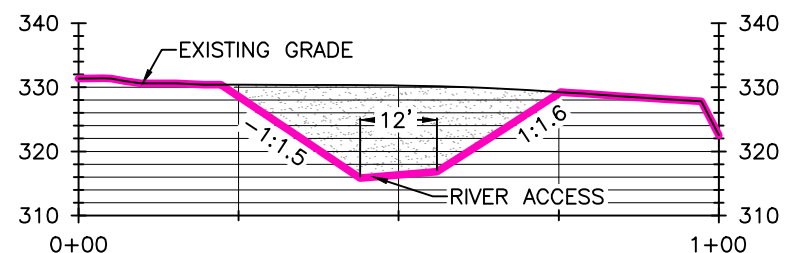
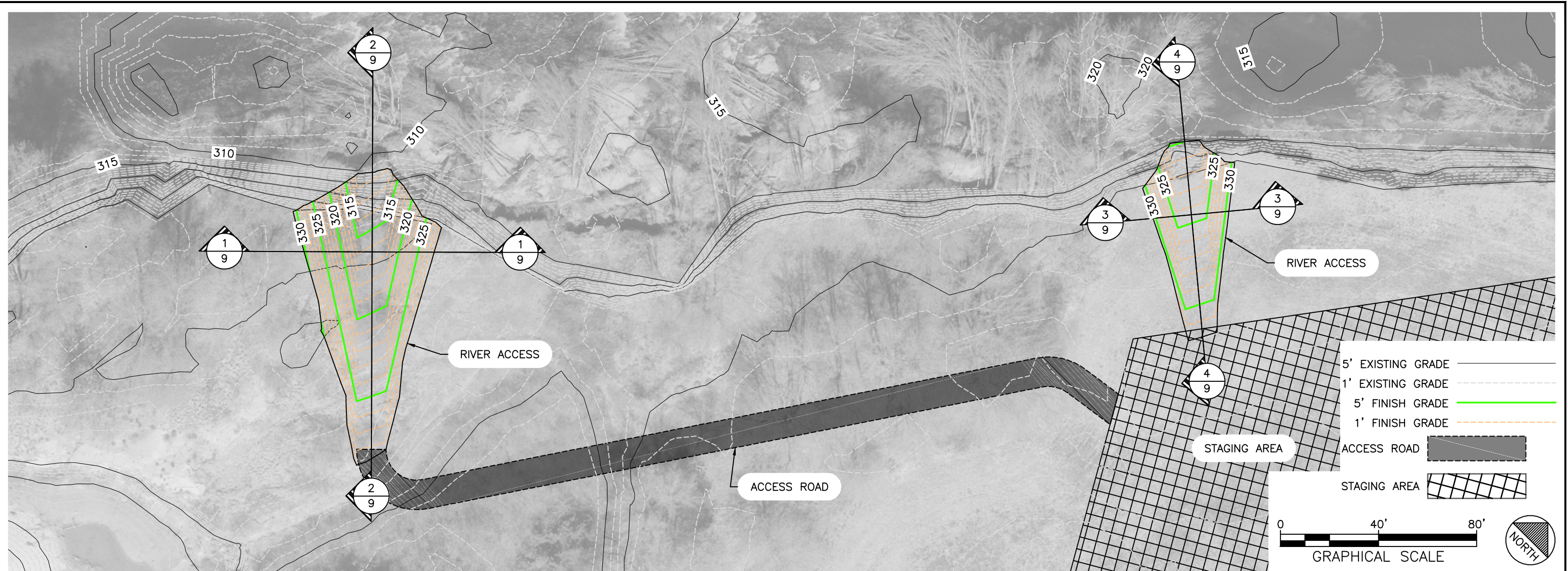
STM	BN	BN
DRAWN	DESIGNED	CHECKED
BN	12-08-2011	
APPROVED	DATE	PROJECT

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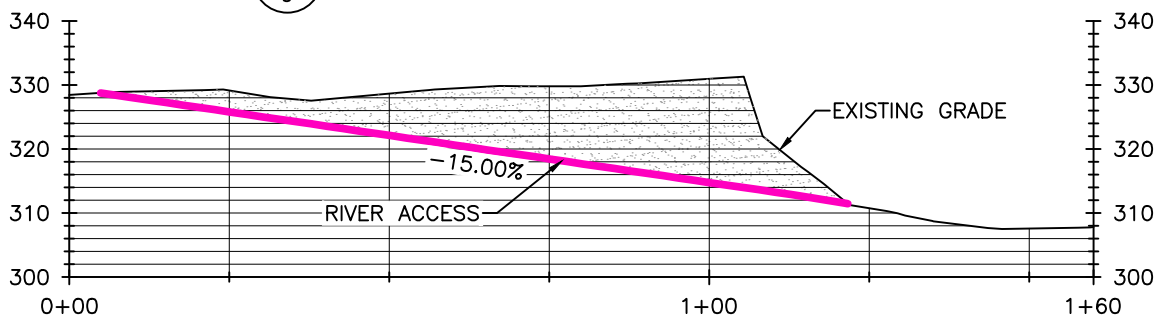


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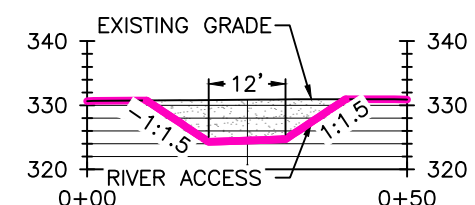
AVULSION SITE PLAN



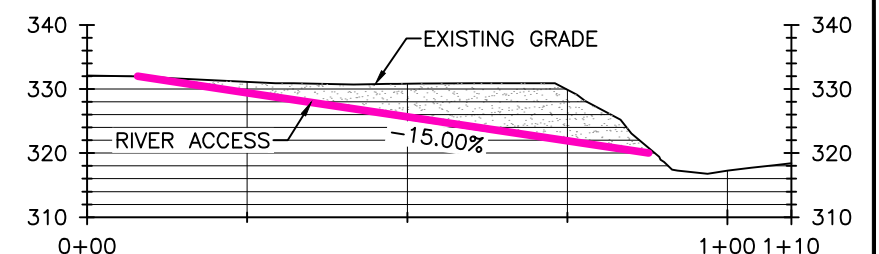
SECTION $\frac{1}{9}$ SOUTH ACCESS ROAD SECTION
1" = 30'



SECTION $\frac{2}{9}$ SOUTH ACCESS ROAD PROFILE
1" = 30'



SECTION $\frac{3}{9}$ NORTH ACCESS ROAD SECTION
1" = 30'



SECTION $\frac{4}{9}$ NORTH ACCESS ROAD PROFILE
1" = 30'

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6-9 AVULSION SUBPLOT.dwg PLOTTED December 6, 2011

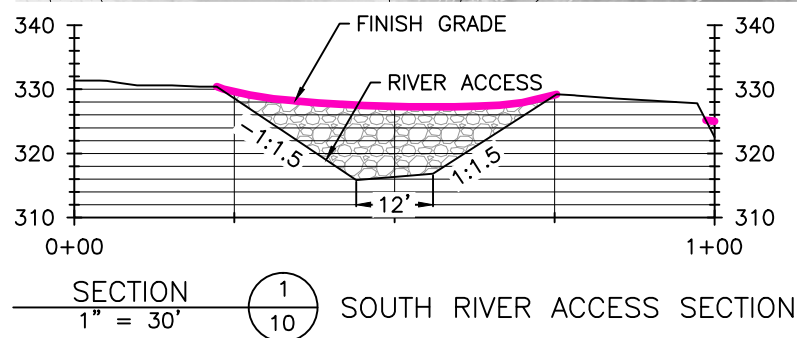
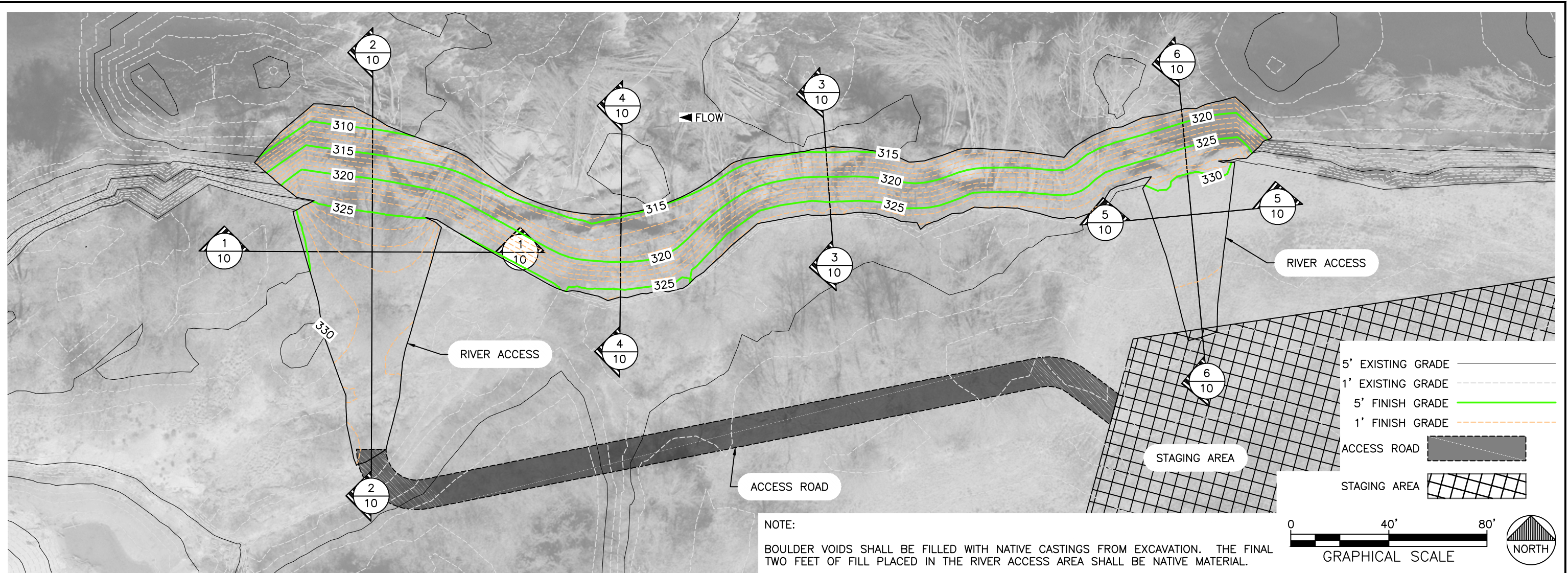
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DRAWN	DESIGNED	CHECKED
BN	12-08-2011	
APPROVED	DATE	PROJECT

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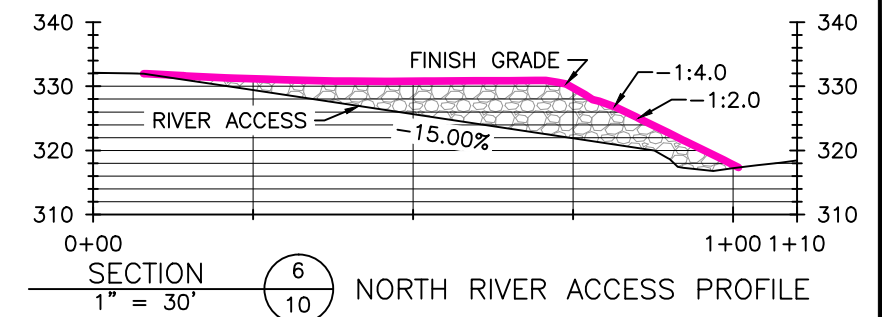
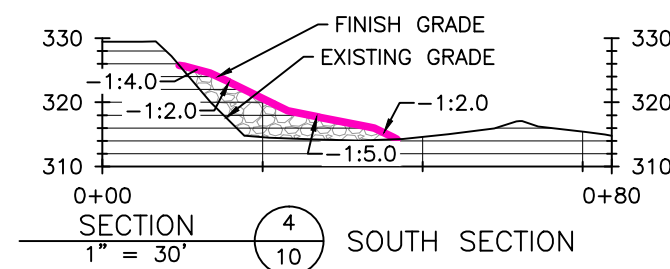
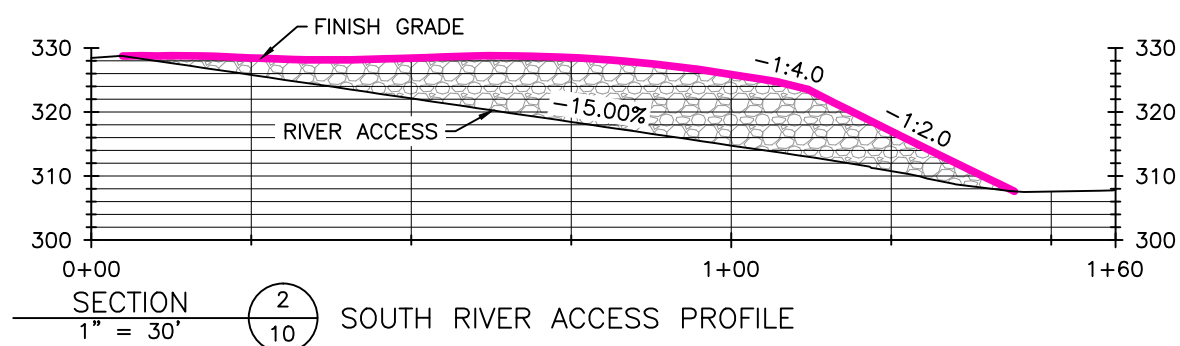
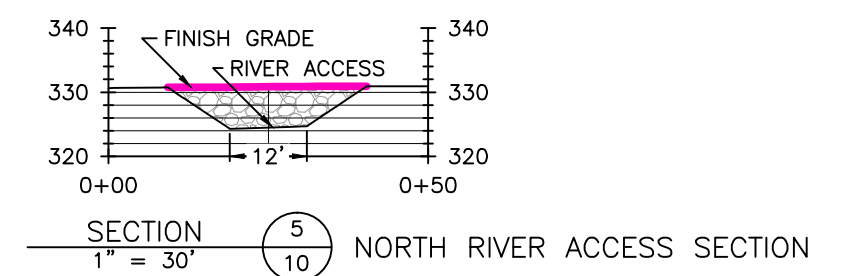
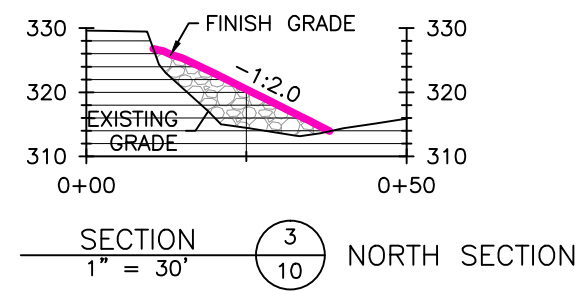
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AVULSION -- RIVER
ACCESS GRADING

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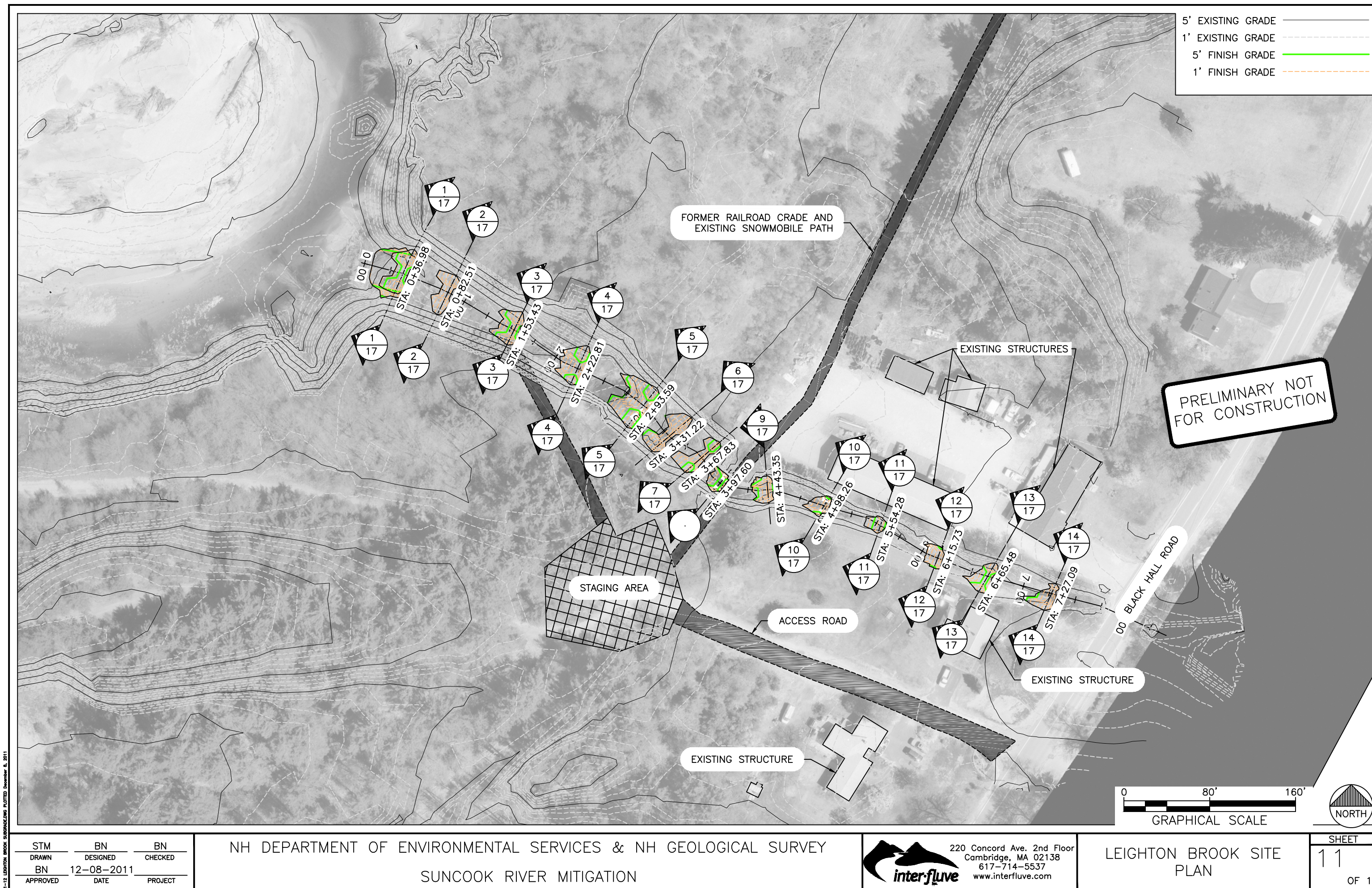
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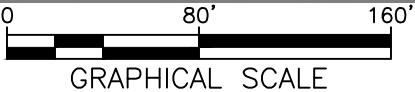
AVULSION -- FINAL GRADING

SHEET
10
OF 19



- 5' EXISTING GRADE
- 1' EXISTING GRADE
- 5' FINISH GRADE
- 1' FINISH GRADE

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11-12 LEIGHTON BROOK SURFACE LINE PLOTTED December 8, 2011

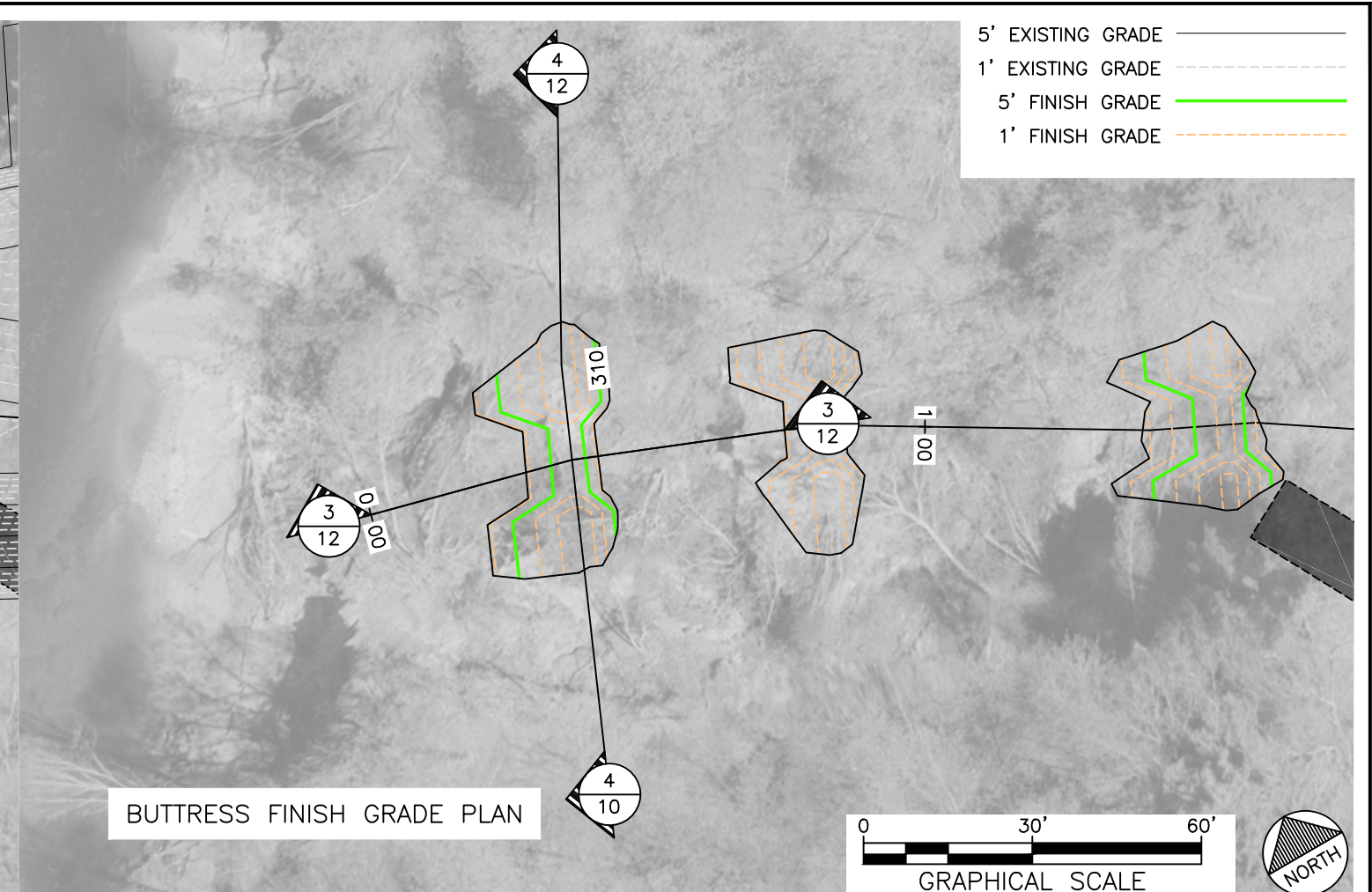
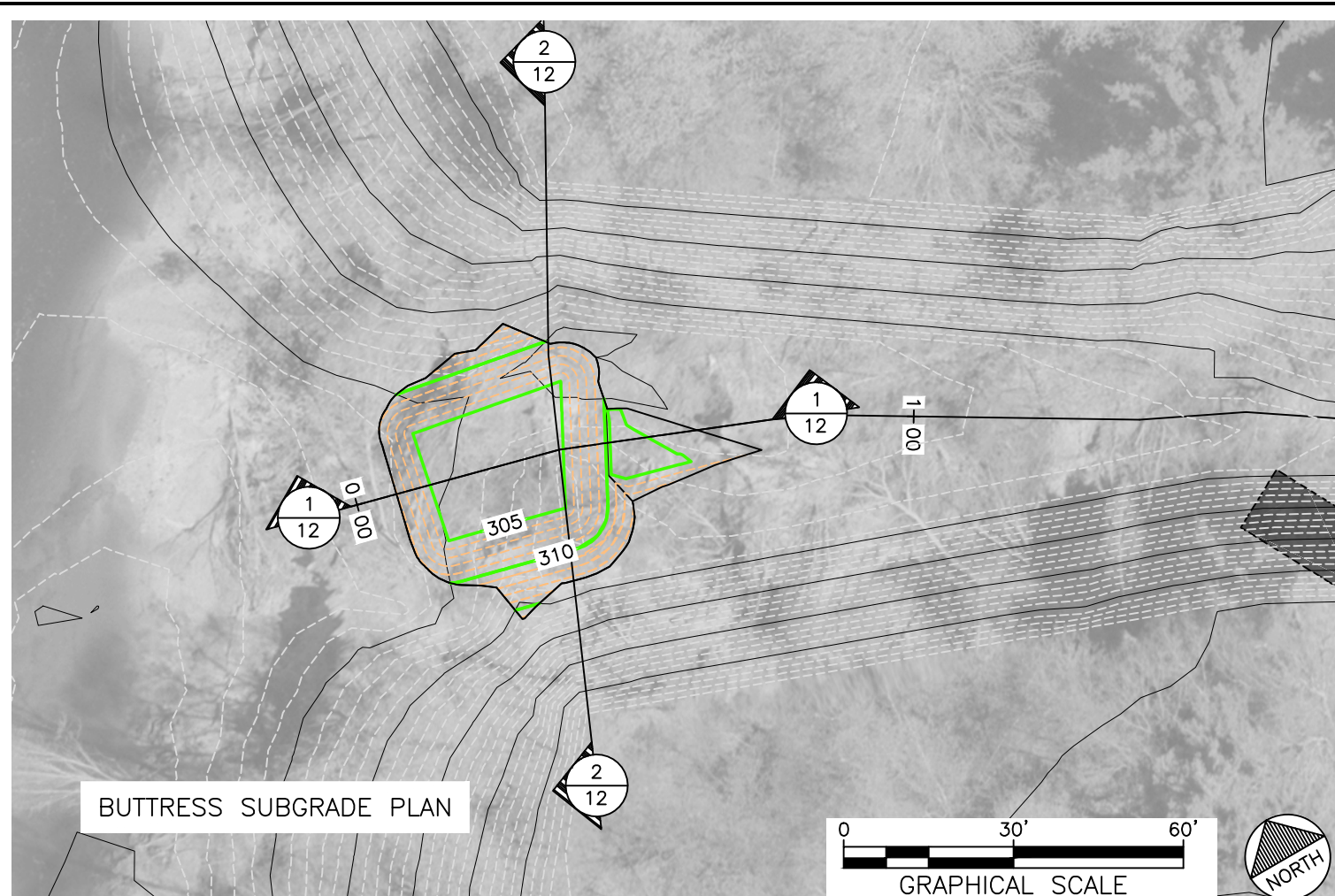
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DRAWN	DESIGNED	CHECKED
BN	12-08-2011	
APPROVED	DATE	PROJECT

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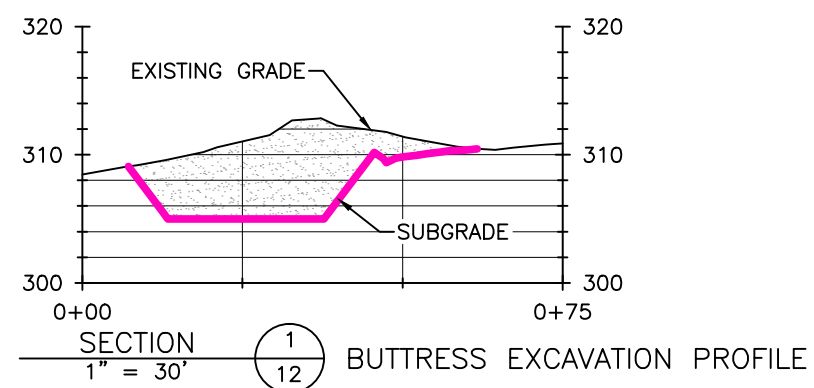


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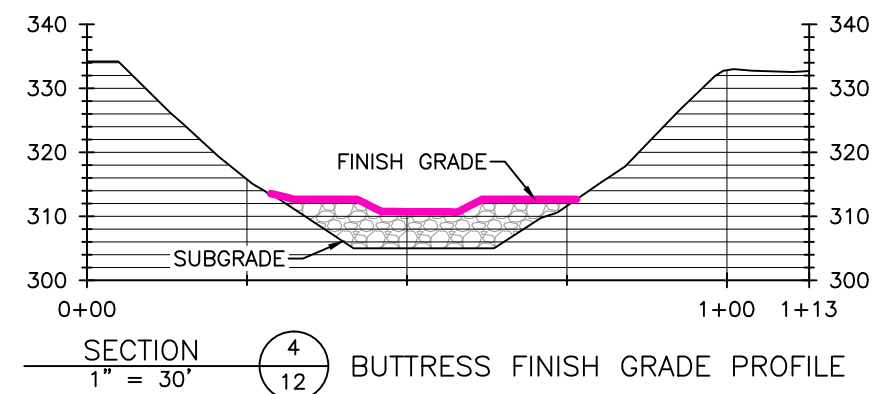
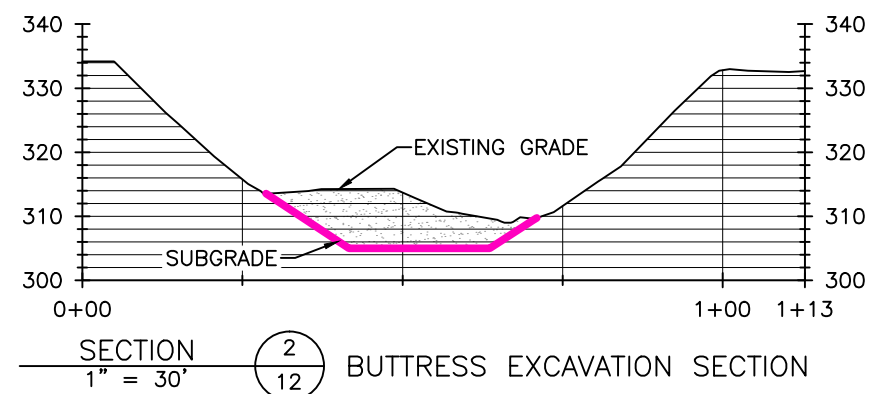
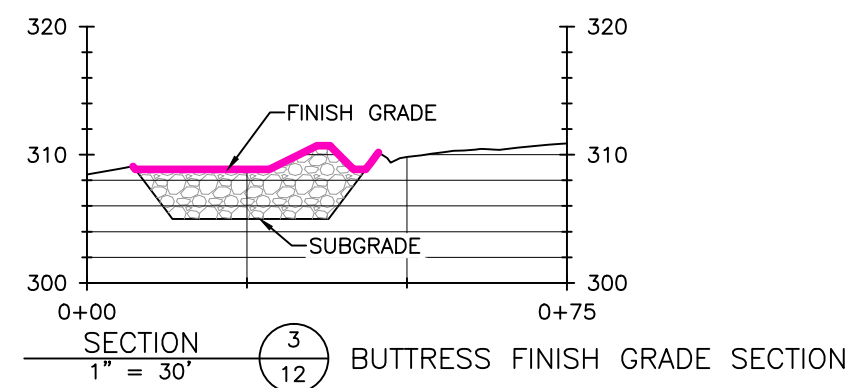
LEIGHTON BROOK SITE PLAN



5' EXISTING GRADE ———
 1' EXISTING GRADE - - - - -
 5' FINISH GRADE ———
 1' FINISH GRADE - - - - -



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APPROVED	DATE	PROJECT

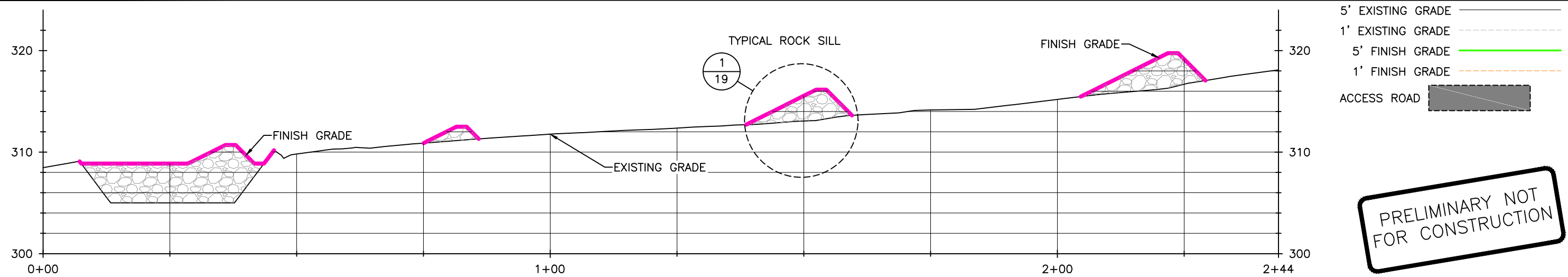
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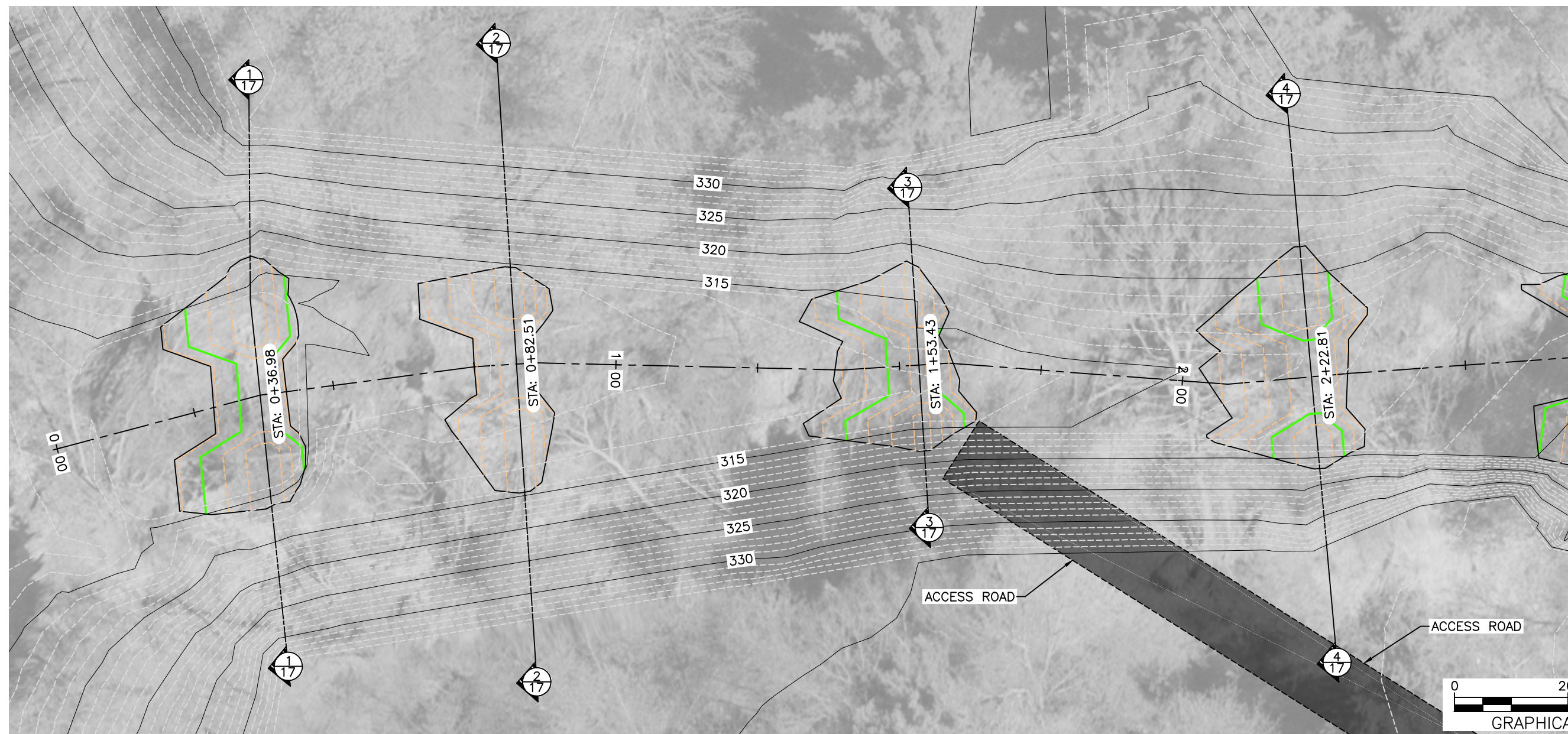
LEIGHTON BROOK --
 ROCK BUTTRESS

SHEET
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11-12 LEIGHTON BROOK SUBGRADE LINE PLOTTED December 8, 2011



LEIGHTON BROOK CENTER LINE



13-17 LEIGHTON BROOK FINISH GRADE.dwg PLOTTED December 6, 2011

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DRAWN	DESIGNED	CHECKED
BN	12-08-2011	
APPROVED	DATE	PROJECT

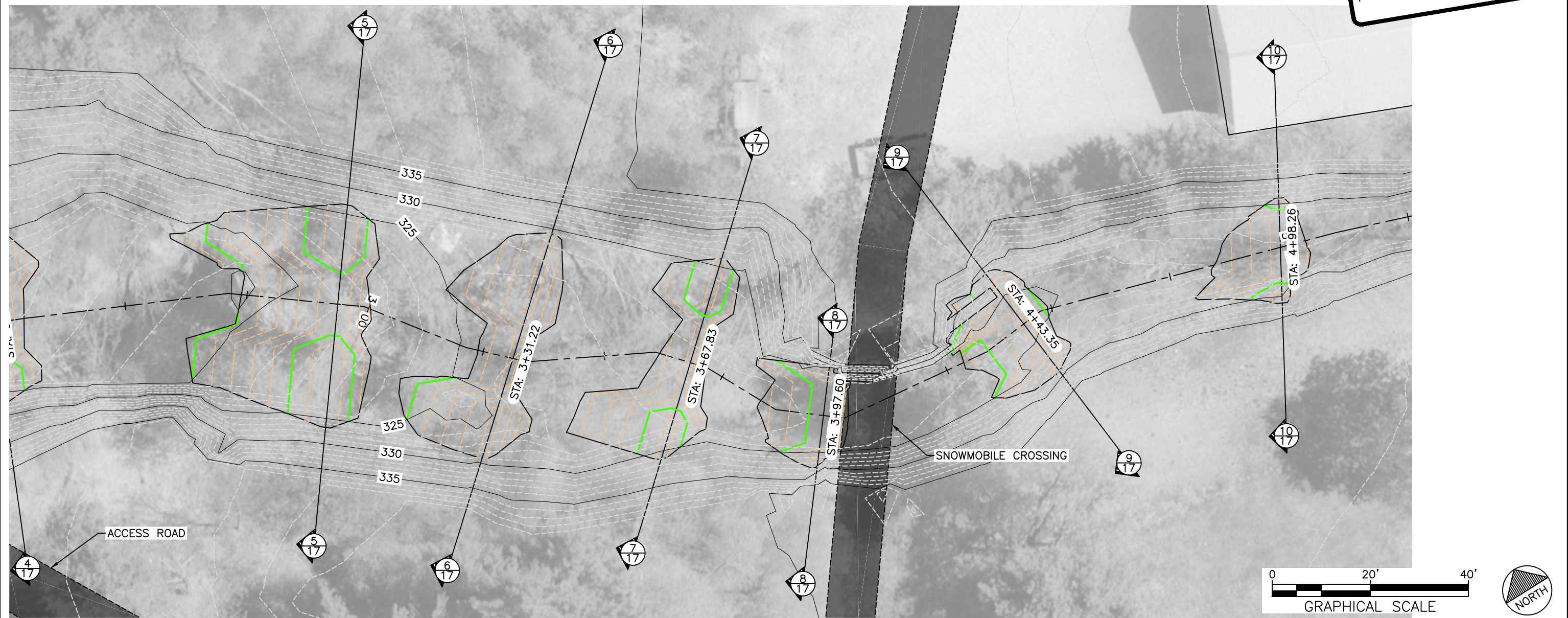
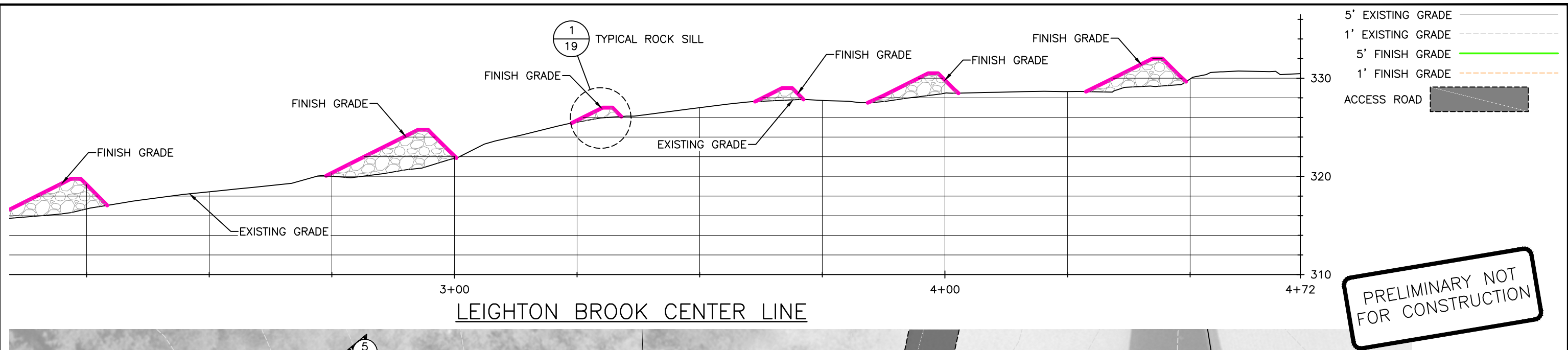
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LEIGHTON BROOK PLAN
AND PROFILE - (1)

SHEET
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13-17 LEIGHTON BROOK FINISH GRADE.dwg PLOTTED December 8, 2011

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APPROVED	DATE	PROJECT

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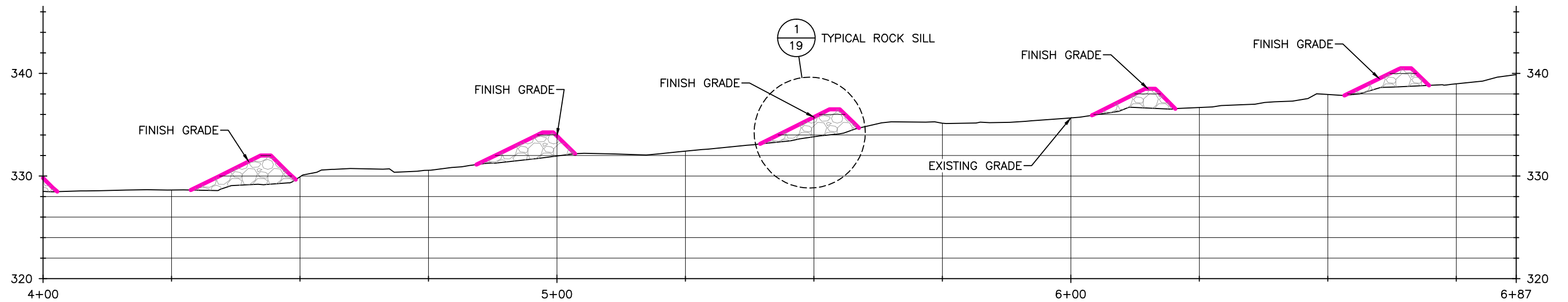
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LEIGHTON BROOK PLAN
AND PROFILE - (2)

SHEET
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LEIGHTON BROOK CENTER LINE



13-17 LEIGHTON BROOK FINISH GRADE.Plotting December 8, 2011

STM	BN	BN
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SUNCOOK RIVER MITIGATION

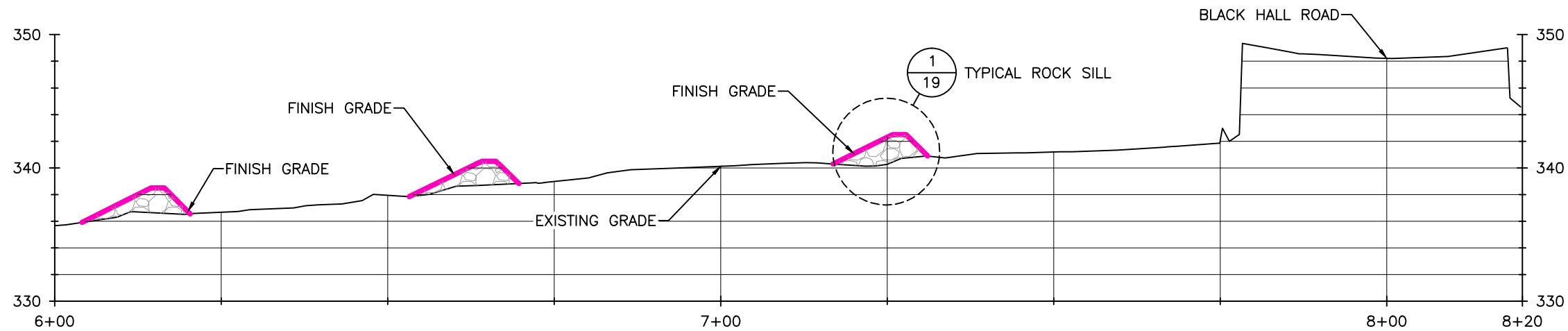


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LEIGHTON BROOK PLAN
AND PROFILE - (3)

SHEET
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OF 19

5' EXISTING GRADE —————
 1' EXISTING GRADE - - - - -
 5' FINISH GRADE —————
 1' FINISH GRADE - - - - -



LEIGHTON BROOK CENTER LINE



13-17 LEIGHTON BROOK FINISH GRADE.dwg PLOTTED December 8, 2011

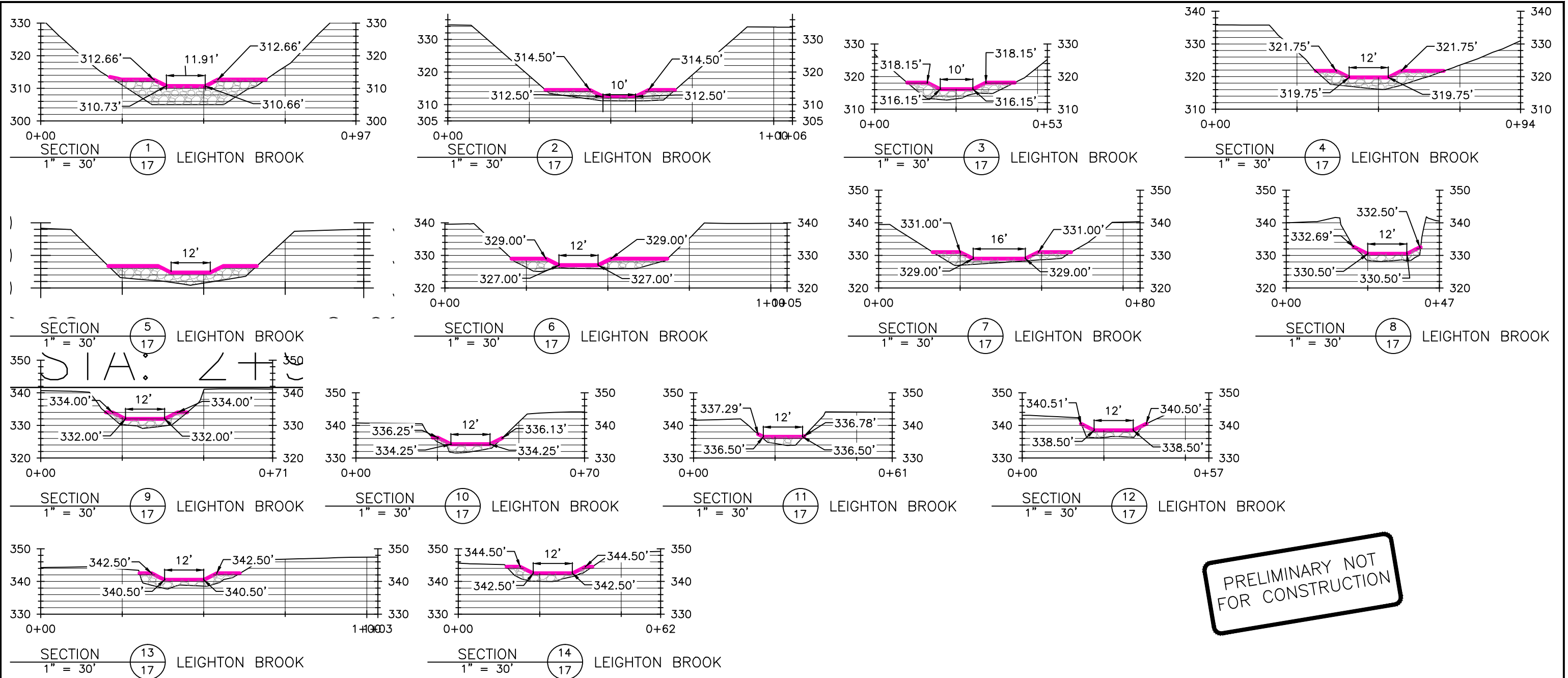
STM	BN	BN
DRAWN	DESIGNED	CHECKED
BN	12-08-2011	
APPROVED	DATE	PROJECT

NH DEPARTMENT OF ENVIRONMENTAL SERVICES & NH GEOLOGICAL SURVEY
 SUNCOOK RIVER MITIGATION

inter-fluve
 220 Concord Ave. 2nd Floor
 Cambridge, MA 02138
 617-714-5537
 www.interfluve.com

LEIGHTON BROOK PLAN
 AND PROFILE - (4)

SHEET
 16
 OF 19



PRELIMINARY NOT
FOR CONSTRUCTION



STM	BN	BN
DRAWN	DESIGNED	CHECKED
BN	12-08-2011	
APPROVED	DATE	PROJECT

NH DEPARTMENT OF ENVIRONMENTAL SERVICES & NH GEOLOGICAL SURVEY

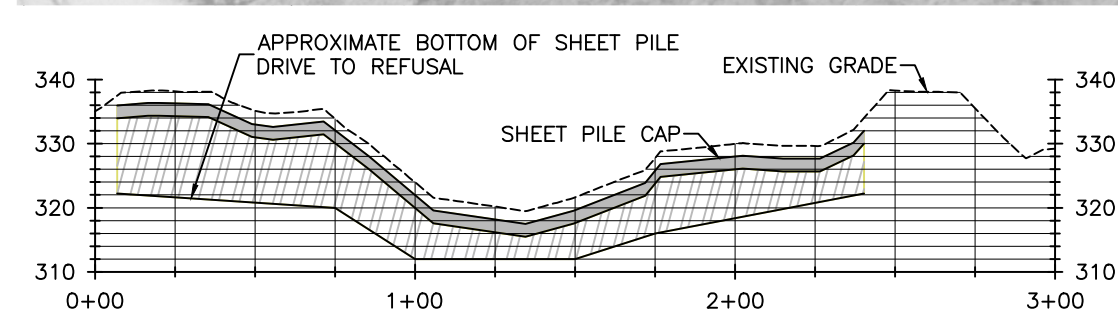
SUNCOOK RIVER MITIGATION

interfluve

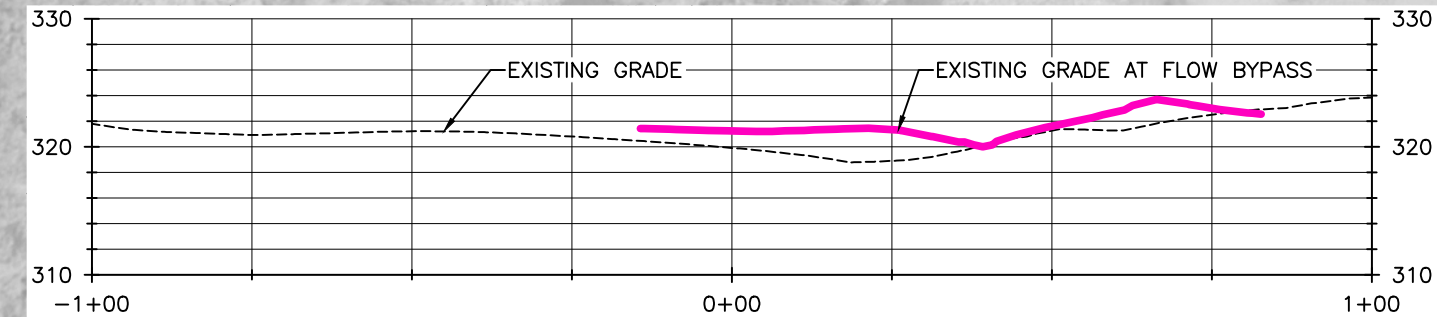
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LEIGHTON BROOK
SECTIONS

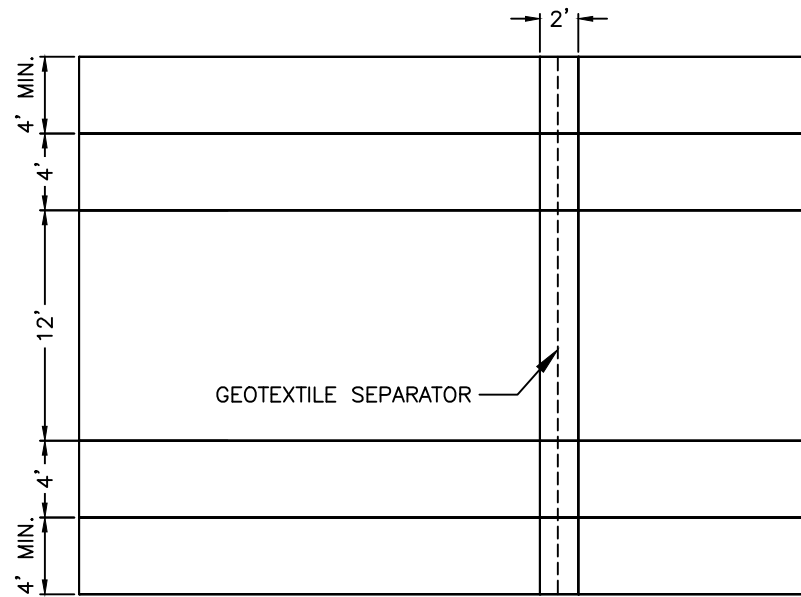
SHEET
17
OF 19



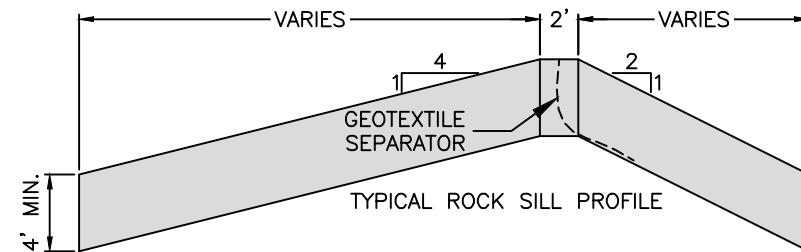
SECTION 1
1" = 60' LITTLE SUNCOOK SHEET PILE PROFILE



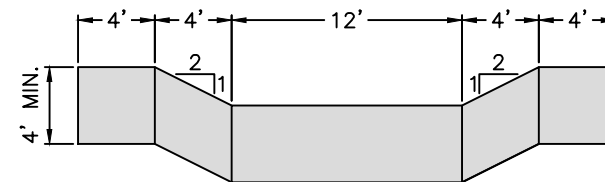
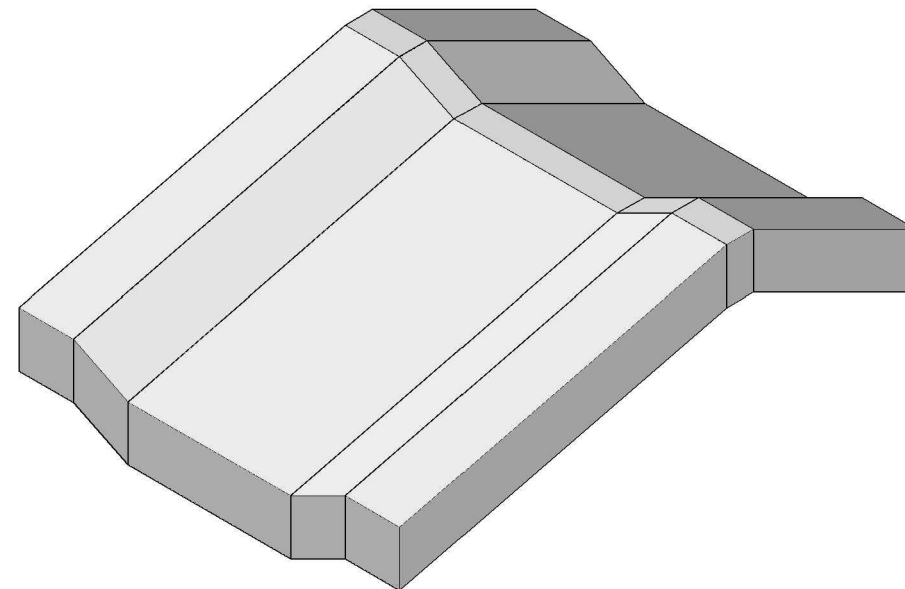
SECTION 2
1" = 30' LITTLE SUNCOOK PROFILE



TYPICAL ROCK SILL PLAN



TYPICAL ROCK SILL PROFILE



TYPICAL ROCK SILL PLAN

DETAIL 1" = 10' (1/19) TYPICAL ROCK SILL

PRELIMINARY NOT
FOR CONSTRUCTION